

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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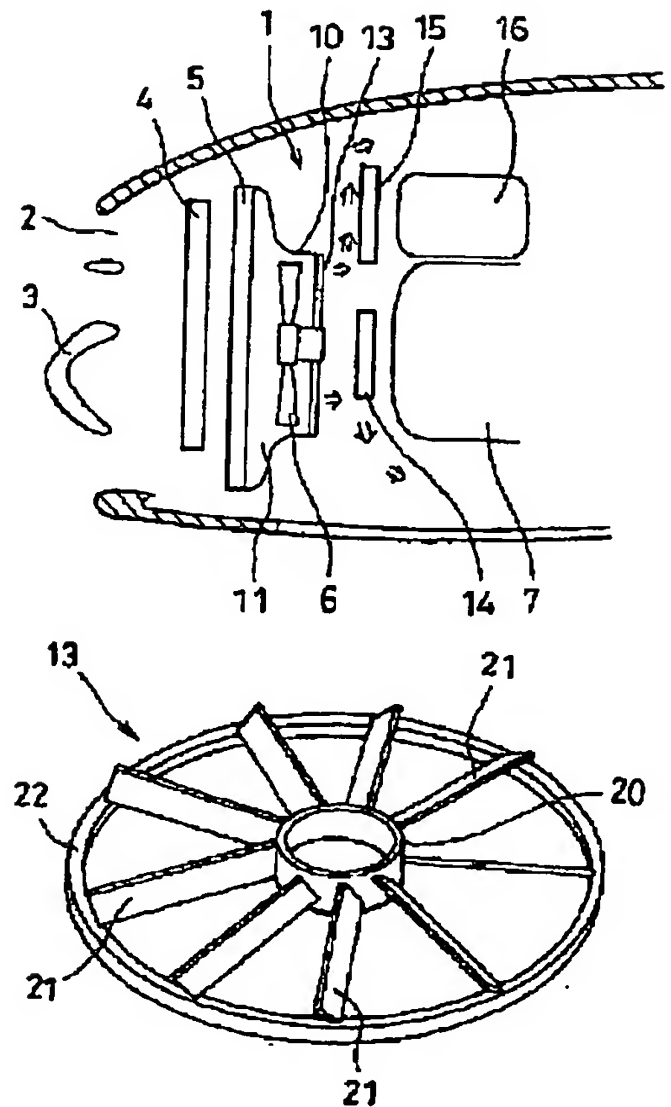
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APPLICATION NUMBER : 09063857

APPLICANT : ZEXEL CORP;

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TITLE : COOLING AIR  
INTRODUCING/DISCHARGING DEVICE



**ABSTRACT :** PROBLEM TO BE SOLVED: To eliminate the inconvenience of a reduction in a capacity by providing a wind direction changing plate in the rear side of a fan in a cooling air introducing/discharging device added to the radiator or the like of an automobile and composing this wind direction changing plate of a number of radial direction fixed blades having slippage angles in a fan rotation direction side.

**SOLUTION:** In the engine room 1 of an automobile, a grill 3 is disposed in a front air taking-in port 2, a capacitor 4 and a radiator 5 are disposed next to it and a fan 6 is provided in a rear side. For increasing the efficiency of the fan 6, a shroud 10 is provided between the radiator 5 and the fan 6, and an air passage 11 is formed by this shroud 10. In this case, a wind direction changing plate 13 is provided in the rear side of the fan 6 and the discharging direction of discharge wind is changed to the outside. This wind direction changing plate 13 has a plurality of fixed blades 21 extended from a boss 20 in the center in a radial direction and a reinforcing ring 22 attached to its tip, and 'slippage angles' are provided to the fixed blades 21 of the wind direction changing plate 13.

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